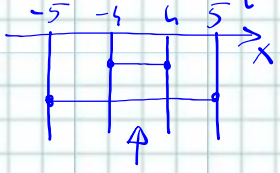
La vita è bella (e invece è dura)

$y = |-3+\sqrt{25-x^2}|$ $\quad \sqrt{f(x)} \geq g(x)$

$-3+\sqrt{25-x^2} \geq 0 \quad \sqrt{25-x^2} \geq 3$

$\begin{cases} y \geq 0 \\ 25-x^2 \geq 9 \\ 25-x^2 \geq 0 \end{cases} \quad \begin{cases} y \geq 0 \\ -x^2+16 \geq 0 \\ -x^2+25 \geq 0 \end{cases}$



$-4 \leq x \leq 4$

$\begin{cases} y = -3+\sqrt{25-x^2} \\ y = 3-\sqrt{25-x^2} \end{cases} \quad -4 \leq x < 4 \cup y \geq 0 \quad y \geq -3$

$\cup$

$x < -4 \cup x \geq 4 \cup y \geq 0 \cup y \leq 3$

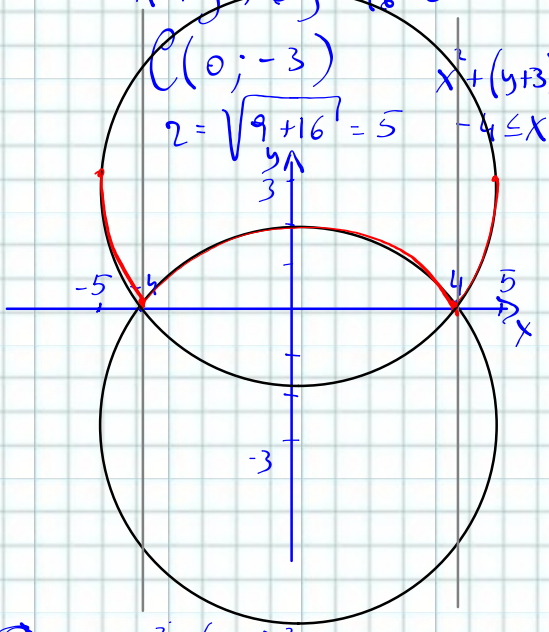
① $\begin{cases} (y+3)^2 = \sqrt{25-x^2} \\ \sqrt{25-x^2} = (3-y)^2 \end{cases} \quad -4 \leq x < 4$ $\quad \cup \quad x < -4 \cup x \geq 4$

① $x^2+9+6y+x^2-25=0 \quad -4 \leq x < 4$

$x^2+y^2+6y-16=0$

$C(0;-3) \quad r = \sqrt{9+16} = 5$

$x^2+(y+3)^2=25 \quad -4 \leq x < 4$



② $25-x^2=(3-y)^2 \quad x < -4 \cup x \geq 4$

$x^2+y^2-6y-16=0$

$C(0;3) \quad r = \sqrt{9+16} = 5$

$x^2+(y-3)^2=25$

$y \geq 0 \quad y \geq 0$

$3-y \geq 0 \quad y \leq 3$

$$y = |-3 + \sqrt{25 - x^2}|$$

$$\begin{cases} y \geq 0 \\ y = |-3 + \sqrt{25 - x^2}| \\ 25 - x^2 \geq 0 \end{cases} \quad \begin{cases} y \geq 0 \\ y = -3 + \sqrt{25 - x^2} \\ -5 \leq x \leq 5 \end{cases}$$